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Yoram Ofek

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EXAMINER

TRINH, TAN H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/814,723	Applicant(s) OFEK ET AL.	
	Examiner TAN TRINH	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11-01-2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. Regarding the double patenting rejection as in the previous action, it is now withdrawn based on applicant submitted a Terminal Disclaimer file on 12-29-2008.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-4, 8-63 are rejected under 35 U.S.C. 102(e) as being anticipated by De Champlain (U.S. Patent No. 6,587,080).

Regarding claim 12, De Champlain teaches an antenna system for transmitting and receiving a plurality of data packets (see fig. 1-3), the system comprising: an antenna control unit (196) (see fig. 7) a plurality of directional antenna (136) sectors (fig. 3) each associated with a respective region of space for transmitting and receiving electromagnetic signals (see fig. 3, col. 13, lines 43-67, col. 14, lines 40-67); at least one receiving controller (fig. 7, controller 186); wherein each the directional antenna sector (fig. 3) is at least one of the following: a flat panel, a planar, a parabolic dish, a slotted, a micro-strip, omni and a Yagi (see Yagi (136) col. 13, lines 61-63); wherein the antenna control unit (196) selects the manner in which each of selected ones of the directional antenna sectors (156) is coupled to the transmitted signal prior to transmitting of at least one data packet (see fig. 7, fig. 2, col. 16, lines 15-16, col. 17, lines 1-67); wherein,

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prior to receiving of at least one data packet the antenna control unit selects the manner in which each of the selected ones of the directional antenna sectors (156) is coupled to the received signal (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67); and wherein a selected one of the at least one the receiving controller measures electromagnetic characteristics of the received signal from the selected ones of the plurality of directional antenna sectors (156) (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67) .

Regarding claim 38, De Champlain teaches a communications (see fig. 1-3) method, comprising: transmitting and receiving a plurality of data packets to and from an antenna control unit (196) (see fig; 7); transmitting and receiving electromagnetic signals to and from a plurality of directional antenna (136) sectors (156) each associated with a respective region of space (see fig. 3, col. 13, lines 43-67, col. 14, lines 40-67), responsive to the transmitting and receiving from the antenna control unit (196); providing for at least one receiving controller (fig. 7, controller 186), responsive to the transmitting and receiving electromagnetic signals (see fig. 3, col. 13, lines 43-67, col. 14, lines 40-67); providing for at least one of the following: a flat panel, a planar, a parabolic dish, a slotted, a micro-strip, omni and a Yagi for each the directional antenna sector (156) (see Yagi (136) col. 13, lines 61-63); selecting, prior to transmitting of at least one data packet via the antenna control unit (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67), the manner in which selected ones of the directional antenna sectors (156) are coupled to the transmitted signal responsive to the transmitting and receiving electromagnetic signals (col. 16, lines 15-16, col. 17, lines 1-67); selecting, prior to receiving of at least one data packet via the antenna control unit, the manner in

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which selected ones of the directional antenna (136) sectors (156) are coupled to the received signal responsive to the transmitting and receiving electromagnetic signals (col. 16, lines 15-16, col. 17, lines 1-67); and measuring electromagnetic characteristics of the received signal from selected ones of the plurality of directional antenna sectors via said at least one said receiving controller (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Regarding claim 1, De Champlain teaches a wireless system for transmitting and receiving a plurality of data packets (see fig. 1-3), the system comprising: a plurality of directional antenna sectors each having a respective three-dimensional region for transmitting and receiving electromagnetic signals (see fig. 3, col. 13, lines 43-67, col. 14, lines 40-67); a plurality of access control units each having a baseband processor (194); an antenna control unit (196) (fig. 7); wherein each the directional antenna sector (156) transmits an electromagnetic signal in a predefined region in three-dimensional space when coupled to a selected one of the access control units with baseband processors (see fig. 3 and 7, col. 13, lines 43-67, col. 14, lines 40-67); wherein selected ones of the directional antenna (136) sectors (156) are coupled to at least one selected one of the access control units for receiving data packets and for measuring at least one received electromagnetic signal characteristics (see fig. 7, col. 16, lines 15-16, col. 17, lines 1-67); wherein selected ones of the at least one the received electromagnetic signal characteristics are transferred to the antenna control unit (196) (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67); and wherein the antenna control unit selects at least one of the access control units within a first predefined time interval prior to

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the transmission of at least one data packet responsive to the received electromagnetic signal characteristics (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Regarding claim 2, De Champlain teaches the access control unit is part of at least one of: an 802.11 wireless network adapter, an 802.15 wireless network adapter, an 802.16 wireless network adapter, a 3G cellular phone, a 4G cellular phone, a mobile device, a laptop computer, a personal computer, a personal digital assistant, a cellular phone, a 2.5G cellular phone, a 3G device, a 4G device, a 5G device, a multimedia device, a base station, a wireless access point, an access router, and a packet switch line card (see fig. 1-2 and 7, col. 13, lines 43-60, and col. 16, lines 17-44).

Regarding claim 3, De Champlain teaches the antenna control unit (196) selects one of the plurality of access control units (156) for transmitting at least one data packet (see fig. 1, 3 and 7, col. 16, lines 15-67, col. 17, lines 1-65).

Regarding claim 4, De Champlain teaches each of the plurality of access control units (168) is coupled to at least one respective one of the directional antenna (136) sectors (156) see fig. 3 and 7).

Regarding claim 8, De Champlain teaches the system (see fig. 1 and 7) comprising: a first device (104) comprising at least one receiving controller (fig. 7, 170 of 186); at least one

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transmitting controller (fig. 7, 168 of 186); and a plurality of directional antenna sectors (156) each having a respective three-dimensional region for transmitting and receiving electromagnetic signals (see fig. 3, col. 13, lines 43-67 and col. 14, lines 40-67); wherein each of the directional antenna (136) sectors (156) transmits electromagnetic signals in a predefined region responsive to coupling to a selected one of said at least one transmitting controller of the first device (104) (see fig. 1 and 7, col. 16, lines 15-16, col. 17, lines 1-67); wherein the selected one of said at least one transmitting controller of the first device (104) is selectively coupled to at least one of the directional antenna sectors in order to transmit a first signal to a second device (102) via a selected one of the wireless channels (see fig. 1 and 7, col. 16, lines 15-16, col. 17, lines 1-67); wherein the second device measures electromagnetic characteristics of the first signal and responsive thereto sends information back to the first device; wherein, prior to the transmission of at least one data packet, a selected one of the receiving controllers of the first device selects at least one of the directional antenna sectors, responsive to the information received from the second device; and wherein a selected one of the transmitting controllers is selectively coupled to a at least one of the directional antenna sectors of the first device in order to transmit at least one data packet via at least one of the directional antenna sectors as selected by the receiving controller of the first device (see fig. 1 and 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Regarding claim 9, De Champlain teaches at least one of the first device and the second device is part of at least one of the following: a wireless access point, an 802.11 access point, an 802.11 wireless network adapter, an 802.15 access point, an 802.15 wireless network adapter, an

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802.16 access point, an 802.16 wireless network adapter, a base station, a cellular phone base station, a 3G base station, a 4G base station, a 3G wireless device, a 4G wireless device, a mobile device, a laptop computer, a desktop computer, a personal digital assistant, a cellular phone, a 2.5G cellular phone, a 3G device, a 4G device, a 5G device, a multimedia device, an electronic book, and an access router (see fig. 1-2 and 7).

Regarding claim 10, De Champlain teaches the first device (104) is selectively coupled to at least one of the directional antenna (136) sectors (156) in at least one of: in a predefined order, in a random order, and in a circular order (col. 13, lines 61-col 14, lines 11). In this case is circular order of the circular plane.

Regarding claim 11, De Champlain teaches the first device (104) is selectively coupled to at least one of the directional antenna (136) sectors (156) responsive to the information received from the second device (see fig. 1 and 3, and 7).

Regarding claim 13, De Champlain teaches a selected one of the at least one the receiving controller receives the received signal from the selected ones of the directional antenna (136) sectors (156) (fig. 3 and 7); and wherein the selected one of the at least one the receiving controller changes the selected ones of the directional antenna sectors in at least one of: a predefined manner, an arbitrary manner, a random manner, and a predefined manner (col. 13, lines 20-42). In this case, it is a predefined manner.

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Regarding claim 14, De Champlain teaches each the directional antenna sector (156) is coupled at most in one of the following manners: to transmit a transmitted signal, to receive a received signal, to an electric ground potential; and to a predefined electric potential (see fig. 3 and 7).

Regarding claims 15 and 41, De Champlain teaches further comprising: at least one transmitting controller (fig. 7, 186); wherein a selected one of the at least one the transmitting controller is coupled to at least one selected one of the directional antenna (136) sectors (156); and wherein, prior to the transmission of at least one data packet, the selected one of the at least one the transmitting controller selects at least one of the selected ones of the directional antenna sectors responsive to the electromagnetic characteristics of the received signal (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Regarding claims 16 and 42, De Champlain teaches at least two of the plurality of directional antenna (136) sectors (156) are stackable (see fig. 3 and 8, col. 14, lines 23-63).

Regarding claims 17 and 43, De Champlain teaches each of the directional antenna sectors (156) is a flat panel antenna having a width and a length, and wherein the plurality of the directional antenna sectors are aligned according to orientation of the length (see fig. 3 and 8, col. 14, lines 23-63).

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Regarding claims 18 and 44, De Champlain teaches the plurality of directional antenna sectors (156) are positioned as though mounted upon an outer surface of a cylindrically shaped object (see fig. 3 and 8, col. 14, lines 23-67).

Regarding claims 19 and 45, De Champlain teaches each of the directional antenna sectors (156) is a flat panel antenna with a width and length that defines a rectangle (150), wherein each the rectangle is vertically stackable, and wherein each the rectangle is oriented to face a selected predefined direction in space (see fig. 3-5).

Regarding claims 20 and 46, De Champlain teaches each directional antenna (136) sectors is a Yagi directional sector (156), and wherein of the vertically stacked Yagi directional antenna sectors radiates electromagnetic energy in a respective predefined direction in space (see Yagi (136) col. 13, lines 61-63).

Regarding claim 21, De Champlain teaches a plurality of directional antennas (136), wherein each of the plurality of flat panel (150) directional antennas (136) (see fig. 3) is comprised of a plurality of patches arranged in a pattern (see fig. 8); a support structure for attaching the plurality of the flat panel directional antennas (see fig. 3-5); and an antenna control system (196), coupled to each of the plurality of said flat panel directional antennas (156), for selectively coupling and communicating data packets to at least one selected one of said plurality of flat panel directional antennas in accordance with predefined criteria determined on a packet

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by packet basis (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Regarding claims 22 and 48, De Champlain teaches the flat panel directional antennas (156) provide for receiving electromagnetic signals; and wherein the antenna control system is responsive to the electromagnetic signals to provide the predefined criteria (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Regarding claims 23 and 49, De Champlain teaches the predefined criteria is determined for a group of the packets; and wherein the group of the packets is selected responsive to the predefined criteria (see col. 3, lines 3-36).

Regarding claims 24 and 50, De Champlain teaches antenna system and transceiver for transmitting and receiving a plurality of data packets (see fig. 1-3), the system comprising: an antenna control unit (196) (see fig. 7) a plurality of directional antenna (136) sectors (fig. 3) each associated with a respective region of space for transmitting and receiving electromagnetic signals (see fig. 3, col. 13, lines 43-67, col. 14, lines 40-67). De Champlain teaches the antennal system and directing processing system (see fig. 1 and 3-5) that is external computing system and wherein the external computing system provides a source (104 and a destination (102) for the data packets (see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67) .

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Regarding claims 25 and 51, De Champlain teaches the external computing system utilizes at least one of: a plurality of coax cables, a multi-lead coax cable, a parallel data connection, a serial data connection, a parallel data and control connection, parallel data, a timing and control connection, a PCMCIA (personal computer memory card international association) interface, a USB (universal serial bus), an IEEE 1394 (Fire-Wire), an infra red (IR) interface, a free space optical (laser), and a wireless interface (see fig. 2-5 and 7, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Regarding claims 26 and 52, De Champlain teaches the external computer system utilizes at least one of the following protocols: IEEE 802.11, IEEE 802.15, IEEE 802.16, CDMA 2000, WCDMA, UMTS, GPRS, 2.5G, 3G, 4G, 5G, and GSM (see fig. 1-2 and 7, col. 1, lines 14-67 and 7, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Regarding claims 27 and 53, De Champlain teaches the plurality of flat panel directional antennas are attached to one another at a defined angle (see fig. 3-5, col. 3, lines 14-24).

Regarding claims 28 and 54, De Champlain teaches the flat panel directional antennas (156) are attached side-by-side (see fig. 3).

Regarding claims 29 and 55, De Champlain teaches the defined angle is within a range and is adjustable so as to maximize efficiency of the antenna apparatus (see col. 21, lines 11-50).

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In this case, the angle determining is for control the amplitude information to get the maximum range of the signal.

Regarding claims 30 and 56, De Champlain teaches at least two of the plurality of flat panel (150) directional antennas (136) are positioned in the same plane of orientation and operate simultaneously to provide for transmission and reception of the data packets (see fig. 3-5).

Regarding claims 31 and 57, De Champlain teaches the defined angle is a variable within a range and is adjustable so that the antenna apparatus folds to occupy less space (see col. 21, lines 11-50). In this case, the angle determining is for control the amplitude information to get the maximum range of the signal.

Regarding claims 32 and 58, De Champlain teaches the defined angle is within a range, the apparatus further comprising: means for changing the defined angles responsive to a control signal (see col. 21, lines 11-50). In this case, the angle determining is for control the amplitude information to get the maximum range of the signal.

Regarding claims 33 and 59, De Champlain teaches the flat panel directional antennas are attached in a fixed orientation to the support structure (see fig. 3-5).

Regarding claims 34 and 60, De Champlain teaches the flat panel directional antennas are attached in a re-orientatable manner to the support structure (see fig. 3-5).

Regarding claims 35 and 61, De Champlain teaches an omni-directional antenna (see col. 18, lines 63-67).

Regarding claims 36 and 62, De Champlain teaches the flat panel directional antennas are arranged in a plurality of vertically stackable slices (see fig. 3-5).

Regarding claims 37 and 63, De Champlain teaches the vertically stackable slices are positioned as though mounted upon an outer surface of a cylindrically shaped object (see fig. 3).

Regarding claim 39, De Champlain teaches receiving the received signal from selected ones of the directional antenna sectors (156) via the at least one the receiving controller (fig. 7); and changing the selected ones of the directional antenna sectors in at least one of: a predefined manner, an arbitrary manner, a random manner, a predefined manner via said one of the at least one the receiving controller (col. 13, lines 20-42). In this case, it is a predefined manner.

Regarding claim 40, De Champlain teaches coupling each the directional antenna sector in at most one of the following manners: to transmit a transmitted signal, to receive a received signal, to an electric ground potential; and to a predefined electric potential (see fig. 3-5 and 7).

Regarding claim 47, De Champlain teaches providing a plurality of flat panel (150) directional antennas (136) (see fig. 3); arranging a plurality of patches in a predefined pattern in

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each of the plurality of flat panel directional antennas (136) (see fig. 8); attaching the plurality of the flat panel directional antennas via an antenna support structure (see fig. 3-5); coupling an antenna control system to each of the plurality of the flat panel directional antennas (see fig. 3); providing predefined criteria for coupling communicating data packets via the antenna control system (see fig. 1 and 3-5) determining the predefined criteria on a packet by packet basis (col. 16, lines 15-16, col. 17, lines 1-67), and selectively coupling communicating data packets to at least one selected one of the plurality of flat panel (150) directional antennas (136) (fig. 3), responsive to the determining of the predefined criteria(see fig. 7, fig. 2-3, col. 16, lines 15-16, col. 17, lines 1-67, col. 6, lines 5-57, col. 7, lines 1-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Champlain (U.S. Patent No. 6,587,080) in view of Snelgrove (U.S. Pub. No. 2003/0045229).

Regarding claim 5, De Champlain teaches antenna system and transceiver for transmitting and receiving a plurality of data packets (see fig. 1-3), the system comprising: an antenna control unit (196) (see fig; 7) a plurality of directional antenna (136) sectors (fig. 3) each associated with a respective region of space for transmitting and receiving electromagnetic

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signals (see fig. 3, col. 13, lines 43-67, col. 14, lines 40-67). But De Champlain does not mention each of the plurality of access control units is coupled to a USB (universal serial bus) hub.

However, Snelgrove teaches the plurality of access control units (32a-n) is coupled to a USB (universal serial bus) hub (see fig. 1-2, page 3-4, sections [0028, 0045 and 0048]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of De Champlain with Snelgrove, in order to provide plurality of function devices may connect to the USB via the same set of USB logic, and USB standard communication protocols to communicate with USB host via generic endpoint state machine (see suggested by Snelgrove on page 4, section [0048]).

Regarding claim 6, Snelgrove teaches UBS Hub is coupled to the antenna control unit (124) control and process signal to antenna (100) (see fig. 2, page 2, sections [0014-0016]).

Regarding claim 7, Snelgrove teaches each of the plurality of access control units (32a-n) utilizes an 802.11-based device coupled to a USB hub, and wherein the USB hub is coupled to the respective plurality of directional antenna sectors (100) (see fig. 1-2, page 1-2, sections [0008, 0011 and 0014] and page 4, sections [0047-0048]).

Conclusion

6. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to the Customer Service Window (now located at the **Randolph Building, 401 Dulany Street, Alexandria, VA 22314**).*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh
Division 2618
February 23, 2009

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/TAN TRINH/

Primary Examiner, Art Unit 2618